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Roxarsone is an arsenic-containing food-additive used in the chicken industry to prevent intestinal diseases and to promote animal growth. Roxarsone is poorly metabolized and present in the poultry litter, which is commonly sold to nearby farms. While the subsequent fate of roxarsone in the environment is unclear, possible breakdown products are inorganic arsenic species similar to the ones causing the current arsenicosis crisis in Bangladesh.

Using surface-specific laser probes, scientists at Northwestern University have monitored roxarsone binding to silica/water interfaces for the first time and determined that roxarsone is highly mobile in silica-rich soil environments.

The scientists on this project include Peter Stair (PI), Franz Geiger (co-PI) and graduate student Chris Konek.